

No.

200500120



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pure Seed Testing, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, RED

'Florentine GT'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this third day of May, in the year two thousand and seven.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and The Paperwork Reduction Act (PRA) of 1995.

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

| | | | |
|--|--|---|--|
| 1. NAME OF OWNER Pure Seed Testing, Inc. | | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME PST-4CR1 | 3. VARIETY NAME Florentine GT |
| 4. ADDRESS (Street and No., or RFD No., City, State, and ZIP Code, and Country) PO Box 449 Hubbard, OR 97032 | | 5. TELEPHONE (include area code) 503-263-0719 | FOR OFFICIAL USE ONLY PVPO NUMBER 200500120 |
| | | 6. FAX (include area code) 503-263-0703 | FILING DATE February 7, 2005 |
| 7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation | 8. IF INCORPORATED, GIVE STATE OF INCORPORATION Oregon | 9. DATE OF INCORPORATION 03 June 1974 | |
| 10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) | | | F E E S R E C E I V E D |
| Melodee Fraser, Ph.D. PO Box 176 Rolesville, NC 27571 | | | Crystal Rose-Fricker PO Box 449 Hubbard, OR 97032 |
| | | | FILING AND EXAMINATION FEES: \$ 3652⁰⁰ DATE 2/7/2005 CERTIFICATION FEE: \$ 768.00 DATE 4/12/2007 |
| 11. TELEPHONE (Include area code) 919-556-0146 | 12. FAX (Include area code) 919-556-0174 | 13. E-MAIL mlkfraser@aol.com | |
| 14. CROP KIND (Common Name) strong creeping red fescue | 16. FAMILY NAME (Botanical) Gramineae | 18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | |
| 15. GENUS & SPECIES NAME OF CROP Festuca rubra rubra | 17. IS THE VARIETY A FIRST GENERATION HYBRID? No | IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FC COMMERCIALIZATION. | |
| 19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) | | 20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes," answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no," go to item 23) | |
| a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office) | | 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED | |
| 23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.) | | 22. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.) | |
| 25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties. | | 24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.) | |
| SIGNATURE OF OWNER  | | SIGNATURE OF OWNER  | |
| NAME (Please print or type) Melodee L. Fraser | | NAME (Please print or type) Crystal A. Rose-Fricker | |
| CAPACITY OR TITLE Director of Research - East | DATE 1/04/05 | CAPACITY OR TITLE President | DATE 1/04/05 |

Exhibit A - Revised**Origin and Breeding History of 'Florentine GT' Strong Creeping Red Fescue**

Pure Seed Testing, Inc. (PST) released 'Florentine GT' as part of a breeding program to develop cool-season turfgrass cultivars with tolerance to low rates of the non-selective herbicide glyphosate. This project began during the early spring of 1999, when three PST strong creeping red fescue populations, FRR, 4TDD and 4BBL, were sprayed with various rates of glyphosate, ranging from 8 to 32 oz/acre.

During the late spring of 1999, 50 plants with no visible herbicide damage were selected from these three populations and transplanted into an isolated crossing block designated 4CRU. The plants were allowed to interpollinate and seed was subsequently harvested from each plant during the summer of 1999. Seed from this harvest was used to establish an isolated 3500-plant nursery near Hubbard during the fall of 1999. Plants in this nursery were sprayed with glyphosate at rates ranging from 4 to 8 oz/acre during March 2000.

Forty-one plants with no visible glyphosate damage were selected from the 4CRU nursery during the late spring of 2000 and moved to an isolated crossing block, designated 4CR0, near Hubbard. An additional four plants that survived 8 oz/acre glyphosate in a separate nursery were also moved to this block. These plants were from U.S. collections made by PST. After these 45 plants were moved to the 4CR0 crossing block, but before their pedigrees were recorded, PST's research farm was vandalized by ecoterrorists during June 2000. Stakes identifying the plants in the 4CR0 polycross were removed by the vandals. The stakes were recovered, so the pedigrees of the plants in the polycross were recorded, but could not be traced to specific individuals. In the crossing block, 33% of the plants traced their maternal origin to 'Florentine'; 22% to Frr 3096, which was a plant collected from LePaux, France; 10% to 'Badger'; 9% to PST-4DR; 9% to PST-4PB; 7% to Frr 3991, which was a plant collected from Porthowan Beach, England; 4% to a plant collected at Hinsdale Golf Club, Hinsdale, IL; 4% to a plant collected from Olivewood Cemetery, Riverside, CA and 2% to PST-4CRE, which was developed into 'McAlpin'.

The 45 plants in the 4CR0 polycross interpollinated and seed was subsequently harvested from each plant during the summer of 2000. Seed from this harvest was used to establish an isolated 1700-

plant nursery near Hubbard during the fall of 2000. During March 2001, this nursery was sprayed with 16 oz/acre glyphosate.

Also during the summer of 2000, 34 plants were selected as survivors from various PST nurseries that had been sprayed with glyphosate. These plants were divided vegetatively into 10 propagules each and used to establish an isolated spaced-plant nursery, designated 4CRY, during the fall of 2000. During March 2001, portions of the clonal rows in this nursery were sprayed with 8 oz or 16 oz/acre glyphosate.

During the late spring of 2001, 62 plants showing no herbicide damage were selected from nurseries that had been sprayed with glyphosate during March. These plants; 46 from 4CR0, 12 from 4CRY and four from 4CRU, were transplanted into an isolated polycross designated 4CR1. The plants interpollinated and seed was subsequently harvested from each plant during the summer of 2001.

Seed from this harvest was used to establish an isolated 5400-plant nursery near Hubbard during the fall of 2001. This nursery was sprayed 22 Mar 2002 with 16 oz/acre glyphosate. Plants were removed from the nursery prior to anthesis leaving only plants showing little or no herbicide damage. Additional selection criteria for remaining plants were dark green color, freedom from disease symptoms, a high number of reproductive tillers and good floret fertility. Remaining plants interpollinated and seed was subsequently harvested from 821 plants to produce Breeder seed of Florentine GT during the summer of 2002.

The plants that produced the Breeder seed of Florentine GT traced their maternal origins to the following sources: 53% to PST-4CR0, which was 33% Florentine; 18% to Florentine; 12% to Frr 3991; 7% to PST-4PB, which traced to 'Inverness'; 6% to Badger; 3% to PST-4DR, which traced to 'Camilla' and collections from Hillside Park, ND and St. Paul, IL; and 1% to Frr 3096.

Seed production of Florentine GT is limited to three generations of increase from Breeder seed: one each of Foundation, Registered and Certified. Pure Seed Testing, Inc. maintains Breeder seed in Oregon. Florentine GT has shown uniformity and stability multiplied from Breeder seed through the Certified seed generation. No off-types or variants have been observed in the production or multiplication of Florentine GT strong creeping red fescue.

Exhibit B – Amended 11 August 2006**Statement of Distinctness for 'Florentine GT' Strong Creeping Red Fescue**

'Florentine GT' is most similar to 'Florentine' strong creeping red fescue. They differ in the following characteristics:

1. Florentine GT has a mean mature plant height at least 3.4 cm taller than Florentine (Tables 1, 2).
2. Florentine GT has a mean tiller leaf length at least 0.8 cm longer than Florentine (Tables 1, 2).
3. Florentine GT has a mean flag leaf width at least 0.4 mm narrower than Florentine (Tables 1, 2).
4. Florentine GT has an erect growth habit, while Florentine's growth habit is semi-erect to prostrate (Certificate No. 9900196).
5. Florentine GT has an ovate panicle shape, while Florentine's panicle is narrow –tapering (Certificate No. 9900196).

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY PROGRAM
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

EXHIBIT C

**OBJECTIVE DESCRIPTION OF VARIETY
FINE LEAVED FESCUES (*Festuca* spp.)**

| | | |
|---|--|--|
| NAME OF APPLICANT(S) Pure Seed Testing, Inc. | TEMPORARY DESIGNATION PST-4CR1 | VARIETY NAME Florentine GT |
| ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) PO Box 449 Hubbard, OR 97032 | | FOR OFFICIAL USE ONLY VPVO NUMBER 2005 00 120 |

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal characteristics of this variety in the boxes below. Use leading zeroes when necessary (e.g., or). Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACE PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate system used: _____ Describe location of the test area, conditions and number of plants used: **Hubbard, OR seed yield trial; 25 plants measured in each of 3 reps in 2 years.**

1. SPECIES: (With companion varieties for use below – use varieties within species of application variety)

- | | | | |
|---|---------------|---------------------|-----------------|
| <input type="text" value="3"/> 1 = <i>F. rubra</i> ssp. <i>commutata</i> (Chewings) | 11 = Cascade | 12 = Highlight | 13 = Jamestown |
| 2 = <i>F. rubra</i> ssp. <i>litoralis</i> (Creeping Red) | 14 = Banner | 15 = Barfalla | 23 = Merlin |
| 3 = <i>F. rubra</i> ssp. <i>rubra</i> (Spreading Red) | 21 = Dawson | 22 = Starlight | 33 = Fortress |
| 4 = <i>F. ovina</i> (Sheep) | 24 = Pennlawn | 32 = Ruby | 35 = Florentine |
| 5 = <i>F. longifolia</i> (Hard) | 31 = Boreal | 35 = Florentine | |
| 6 = <i>F. tenuifolia</i> (Fine-Leaved Sheep) | 34 = Ensylva | | |
| 7 = Other (Specify) | 41 = Covar | | |
| | 51 = Durar | 52 = Biljart (C-26) | 53 = Scaldis |
| | 61 = Panda | 62 = Barok | |

2. CYTOLOGY:

- | | | | | | |
|---|---------------------------------------|-------------|----------------|---------------|---------------|
| <input type="text" value="5"/> <input type="text" value="6"/> Chromosome Number | <input type="text" value="4"/> Ploidy | 1 = diploid | 2 = tetraploid | 3 = hexaploid | 4 = octoploid |
|---|---------------------------------------|-------------|----------------|---------------|---------------|

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

- | | | | |
|---|--|--|---|
| <input type="text" value="2"/> Northeast | <input type="text" value="1"/> Southeast | <input type="text" value="0"/> North Central | <input type="text" value="2"/> Pacific N.W. |
| <input type="text"/> Other (Specify): _____ | | | |

4. MATURITY: Date First Headed (panicle emergence) Location(s) of Trial(s) **Hubbard, OR**
 Maturity Class:

- | | | |
|---------------------------------|-----------------------------|-----------------------------------|
| 1 = Very Early (Covar) | 2 = Early (Highlight) | 3 = Medium Early (Boreal, Dawson) |
| 4 = Medium Late (Cascade, Ruby) | 5 = Late (Jamestown, Agram) | 6 = Very Late |

Date Headed **8 April (Table 3)**

4. MATURITY: (continued)
- | | | | |
|---|-------------------------|---|----------------------|
| <input type="text" value="0"/> <input type="text" value="5"/> | Days earlier than | <input type="text" value="2"/> <input type="text" value="1"/> | } Comparison Variety |
| | Maturity same as | <input type="text" value=""/> <input type="text" value=""/> | |
| <input type="text" value=""/> <input type="text" value=""/> | Days later than | <input type="text" value=""/> <input type="text" value=""/> | |

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5. PLANT HEIGHT: (At maturity; to top of panicle; average of 10 tallest culms)

| | | | |
|--|--------------------------|---|----------------------|
| <input type="text" value="8"/> <input type="text" value="4"/> <input type="text" value="0"/> | mm Height Table 1 | | |
| <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> | mm shorter than | <input type="text" value=""/> <input type="text" value=""/> | } Comparison Variety |
| | Height same as | <input type="text" value=""/> <input type="text" value=""/> | |
| <input type="text" value="0"/> <input type="text" value="3"/> <input type="text" value="4"/> | mm Taller than | <input type="text" value="3"/> <input type="text" value="5"/> | |

6. GROWTH HABIT:
- | | | | |
|--------------------------------|------------------|----------------------------|-------------------------|
| <input type="text" value="1"/> | 1 = Erect (Ruby) | 2 = Semi-erect (Highlight) | 3 = Prostrate (Silvana) |
|--------------------------------|------------------|----------------------------|-------------------------|

7. RHIZOMES:

| | | | | | |
|---|--------------------------------|---|----------|---|---------------------|
| <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> | mm Length | <input type="text" value=""/> <input type="text" value=""/> | mm Width | <input type="text" value=""/> <input type="text" value=""/> | mm Internode length |
| <input type="text" value="4"/> | 1 = Absent | | | 2 = Weakly Creeping (Dawson) | |
| | 3 = Strongly Creeping (Boreal) | | | 4 = Very Strongly Creeping (Boreal) | |

8. LEAF BLADE:

| | | | | |
|--------------------------------|--------|------------------------------------|------------------------------------|-------------------------------------|
| <input type="text" value="4"/> | Color: | 1 = Light Green (Starlight) | 2 = Medium Light Green (Highlight) | 3 = Medium Dark Green (Ruby, Agram) |
| | | 4 = Dark Green (Jamestown, Manoir) | 5 = Bluegreen (Saphir) | 6 = Graygreen (Scaldis) |
| | | 7 = Other (Specify): | | |

| | | | |
|--------------------------------|---------------------------|--|--------------------------|
| <input type="text" value="1"/> | Glaucosity (Sowing Year): | 1 = Absent | 2 = Present (Vendome) |
| <input type="text" value="1"/> | Anthocyanin; | 1 = Absent | 2 = Present |
| <input type="text" value="1"/> | Hairs (Basal): | 1 = Absent | 2 = Present |
| <input type="text" value="1"/> | Margins: | 1 = Smooth | 2 = Semi-rough 3 = Rough |
| <input type="text" value="2"/> | Margin folding (closure): | 1 = Rolled inward (closed-Highlight) 2 = Flat (open-Jamestown, Engina) | |
| <input type="text" value="3"/> | Width class: | 1 = Very fine (Agram, Frida) 2 = Fine (Jamestown, Highlight, Banner, Dawson) 3 = Medium Fine (Fortress, Ruby, Scaldis) 4 = Medium Coarse (Engina) | |

| | |
|--|--------------------------------------|
| <input type="text" value="1"/> <input type="text" value="3"/> <input type="text" value="0"/> | mm Length (flag leaf) Table 1 |
|--|--------------------------------------|

| | | | |
|---|----------------------------|---|----------------------|
| <input type="text" value="1"/> <input type="text" value="0"/> | mm Shorter than | <input type="text" value="3"/> <input type="text" value="5"/> | } Comparison Variety |
| | Blade length same as | <input type="text" value=""/> <input type="text" value=""/> | |
| <input type="text" value=""/> <input type="text" value=""/> | mm Longer than | <input type="text" value=""/> <input type="text" value=""/> | |

| | |
|--|-------------------------------------|
| <input type="text" value="3"/> <input type="text" value="▲"/> <input type="text" value="5"/> | mm Width (flag leaf) Table 1 |
|--|-------------------------------------|

| | | | |
|--|---------------------------|---|----------------------|
| <input type="text" value="0"/> <input type="text" value="▲"/> <input type="text" value="4"/> | mm Narrower than | <input type="text" value="3"/> <input type="text" value="5"/> | } Comparison Variety |
| | Blade width same as | <input type="text" value=""/> <input type="text" value=""/> | |
| <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> | mm Wider than | <input type="text" value=""/> <input type="text" value=""/> | |

9. LEAF SHEATH:

| | | | |
|--------------------------------|-------------------------|------------------------|--|
| <input type="text" value="2"/> | Anthocyanin (seedling): | 1 = Absent (Highlight) | 2 = Present (Jamestown, Fortress, Marga) |
| <input type="text" value="1"/> | Auricle Hairiness: | 1 = Absent | 2 = Present |
| <input type="text" value="2"/> | Margins: | 1 = Open (Highlight) | 2 = Closed (Jamestown) |

10. PANICLE:

Shape: 1 = Narrow-tapering 2 = Ovate 3 = Oblong 4 = Other (Specify): _____

Type: 1 = Open 2 = Intermediate 3 = Compact

Orientation: 1 = Erect 2 = Nodding

Branch Pubescence: 1 = Glabrous 2 = Pubescent

Anther Color: } 1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish
5 = Reddish 6 = Other (Specify): _____

Glume Color at 50% flowering): }

mm Length

mm Shorter than

Panicle length same as Comparison Variety

mm longer than

11. PALEA:

Hairs (On keels or margins): 1 = Absent (Banner) 2 = Short (Agram, Scaldis, Olds)
3 = Long (Rainier, Fortress, Jamestown)

12. LEMMA: (Mature)

Hairs: 1 = Absent (Jamestown) 2 = Several 3 = Many (Highlight)

mm Lemma Length

mm Shorter than } Comparison Variety

Lemma length same as

mm Longer than

mm Lemma Width

mm Narrower than } Comparison Variety

Lemma width same as

mm Wider than

Awns: 1 = Absent 2 = Present

mm Awn Length

mm Shorter than } Comparison Variety

Awn length same as

mm Longer than

13. SEED (With lemma and palea):

Size Class (g/1000 seed):

1 = [<0-0.9g] (Biljart, Dawson) 2 = [0.9-<1.1g] (Jamestown, Highlight)

3 = [1.1-1.3g] (Fortress, Novorubra) 4 = [>1.3g] (Boreal, Golfrood)

mg per 1000 seed

mg per 1000 seed less than } Comparison Variety

Seed Weight same as

mg per 1000 seed more than

14. DISEASE, INSECT, AND NEMATODE REACTION: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 Melting-out (*Drechslera poa*) (*Helminthosporium vagans*)☐ 1 Leaf Spot (*D. siccans*)☐ 0 Net Blotch (*D. dictyoides*)☐ 0 Leaf Spot (*Bipolaris sorokiniana*)☐ 2 Brown Patch (*Rhizoctonia solani*)☐ 2 Powdery Mildew (*Erysiphe graminis*)☐ 0 Stripe Smut (*Ustilago striiformis*)☐ 0 F. Patch, Pink snow-mold (*Fusarium nivale*)☐ 0 Fusarium Blight (*F. trincinctum*, *F. roseum*)☐ 0 Gray Snow Mold (*Typhula loliae*)☐ 2 Stem Rust (*Puccinia graminis*)☐ 0 Stripe Rust (*P. striiformis*)☐ 0 Leaf Rust (*P. poae-nemoralis*)☐ 2 *P. crandallii*☐ 1 Pythium Blight (*Pythium ultimum*)☐ 2 Red Thread (*Corticium fusciforme*)☐ 2 Dollar Spot (*Sclerotinia homoeocarpa*)☐ Insect _____☐ Nematode _____☐ Other _____☐ Other _____☐ Other _____

15. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics indicate the Degree of Resemblance by placing the column marked D.R. with one of the following numbers:

1 = Application variety is less than comparison variety

2 = Same as

3 = More than, better, greater, darker, more disease resistant, etc.

| CHARACTER | VARIETY | D.R. | CHARACTER | VARIETY | D.R. |
|-----------------|------------|------|---------------|------------|------|
| Rhizome Length | Florentine | 2 | Growth Habit | Florentine | 1 |
| Leaf Width | Florentine | 1 | Leaf Color | Florentine | 1 |
| Panicle Color | Florentine | 1 | Panicle Shape | Florentine | 1 |
| Winter Color | Florentine | 2 | Cold Injury | Florentine | 2 |
| Shade Tolerance | Florentine | 2 | Heat | Florentine | 2 |
| Drought | Florentine | 2 | Disease* | | |

* Specify each disease evaluated.

16. ADDITIONAL DESCRIPTION: (Use additional sheets as required)

Describe all characteristics that cannot be adequately described in the form above in Exhibit D. Comparative varieties should be used as may be appropriate, such as for disease. Append all comparative trial and evaluation data, including measured characters, environmental, and disease tests.

Exhibit D**Additional Description of 'Florentine GT' Strong Creeping Red Fescue**

1. Florentine GT is tolerant to low rates of glyphosate applied during non-freezing temperatures (Tables 4, 5).
2. Florentine GT has shown good turf quality in trials in Oregon (Table 6) and Holland (Table 7).

Table 1. 2003 mean morphological measurements for entries in a fine fescue seed yield trial seeded fall of 2002 near Hubbard, OR.

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| Entry | Plant Height (cm) | Panicle Length (cm) | Top Flag Leaf Height (cm) | Flag Leaf Length (cm) | Flag Leaf Width (mm) | Tiller Leaf Length (cm) | Tiller Leaf Width (mm) | Tiller Count (#/100 cm ²) |
|----------------------|-------------------|---------------------|---------------------------|-----------------------|----------------------|-------------------------|------------------------|---------------------------------------|
| Florentine GT | 84.0 | 14.7 | 33.3 | 13.0 | 3.5 | 14.5 | 2.9 | 61.6 |
| Florentine | 80.6 | 14.7 | 27.3 | 14.0 | 3.9 | 11.9 | 2.4 | 88.6 |
| LSD (0.05) | 3.0 | 0.8 | 2.2 | 1.0 | 0.3 | 1.0 | 0.3 | 15.8 |

Table 2. 2004 mean morphological measurements for entries in a fine fescue seed yield trial seeded fall of 2002 near Hubbard, OR.

| Entry | Plant Height (cm) | Panicle Length (cm) | Top Flag Leaf Height (cm) | Flag Leaf Length (cm) | Flag Leaf Width (mm) | Tiller Leaf Length (cm) | Tiller Leaf Width (mm) | Tiller Count (#/100 cm ²) |
|----------------------|-------------------|---------------------|---------------------------|-----------------------|----------------------|-------------------------|------------------------|---------------------------------------|
| Florentine GT | 80.4 | 13.2 | 28.7 | 8.5 | 2.0 | 10.3 | 1.9 | 81.7 |
| Florentine | 75.6 | 12.6 | 29.0 | 9.5 | 2.5 | 9.5 | 2.0 | 108.6 |
| LSD (0.05) | 2.4 | 0.7 | 1.8 | 0.9 | 0.2 | 0.7 | 0.2 | 18.3 |

Table 3. Mean initial heading dates for entries in a fine fescue seed yield trial seeded fall of 2002 near Hubbard, OR.

| Entry | 2003 | 2004 |
|----------------------|-----------------|-----------------|
| Dawson | 17 April | 13 April |
| Inverness | 12 April | 09 April |
| Florentine GT | 11 April | 08 April |
| Florentine | 11 April | 07 April |
| Flyer | 09 April | 06 April |
| Aberdeen | 07 April | 04 April |
| LSD (0.05) | 4 days | 4 days |

Table 4. Mean glyphosate damage ratings for entries in a fine fescue turf trial seeded 12 September 2002 near Hubbard, OR.

| Entry | 15 Oct | 4 oz/A Roundup | | 8 oz/A Roundup | |
|----------------------|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | % damage 2 WAT ¹ | 14 Nov % damage 4 WAT | 14 Nov % damage 6 WAT | 14 Nov % damage 4 WAT | 14 Nov % damage 6 WAT |
| Florentine GT | 15.0 | 12.5 | 32.5 | 40.0 | 52.5 |
| Aurora Gold | 12.5 | 2.5 | 7.5 | 20.0 | 15.0 |
| Aberdeen | 40.0 | 7.5 | 30.0 | 37.5 | 62.5 |
| LSD (0.05) | 50.8 | 24.1 | 37.8 | 31.3 | 31.0 |

¹WAT = weeks after treatment

Table 5. Mean percent herbicide damage ratings for entries in a turf trial seeded fall of 2003 and sprayed with various rates of Razor™ (glyphosate) herbicide.

2005 00 120

| Entry | 8 oz/A | | | | 16 oz/A | | 8 oz/A |
|----------------------|--------------------|-------------|-------------|-------------|-------------|--------------|-------------|
| | 07 Nov 03 | | 19 Feb 04 | | 19 Feb 04 | | 22 Mar 04 |
| | 2 WAT ¹ | 7 WAT | 2 WAT | 7 WAT | 2 WAT | 7 WAT | 3 WAT |
| Aurora Gold | 20.0 | 22.0 | 20.0 | 50.0 | 80.0 | 90.0 | 10.0 |
| Florentine GT | 47.5 | 45.0 | 17.5 | 92.5 | 82.5 | 100.0 | 38.5 |
| Shademaster II | 60.0 | 90.0 | 20.0 | 99.0 | 80.0 | 100.0 | 75.0 |

¹WAT = weeks after treatment

Table 6. 2003 mean turf quality ratings for entries in a fine fescue turf trial seeded fall of 2002 near Hubbard, OR.

| Entry | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Mean |
|----------------------|------------------|------------|------------|------------|------------|
| PST-4VS | 6.3 ¹ | 7.7 | 7.1 | 6.5 | 6.9 |
| Aberdeen | 5.8 | 6.5 | 7.2 | 6.2 | 6.4 |
| Florentine | 4.3 | 5.5 | 6.7 | 6.7 | 5.8 |
| Florentine GT | 5.2 | 5.3 | 6.1 | 5.3 | 5.5 |
| Miramar | 4.4 | 4.2 | 5.8 | 5.2 | 4.9 |
| PST-4TG | 4.0 | 3.7 | 5.1 | 5.2 | 4.5 |
| LSD (0.05) | 0.8 | 1.0 | 0.7 | 1.0 | 0.5 |

¹9 = ideal

Table 7. Mean establishment and turf quality ratings for entries in a fine fescue turf trial seeded fall of 2002 at den Haan Farm, Bergen op zoom, Holland.

| Entry | Establishment 20 Nov 02 | Turf Quality Mean |
|----------------------|----------------------------|----------------------|
| PST-4VLS | 3.7 ¹ | 9.0 ² |
| Shademaster II | 8.3 | 7.3 |
| Miramar | 7.7 | 6.3 |
| Aberdeen | 7.0 | 6.2 |
| Florentine GT | 6.3 | 6.2 |
| Florentine | 7.0 | 5.8 |
| Syn 4TG | 5.0 | 4.2 |
| Syn 4EU | 5.7 | 2.8 |
| LSD (0.05) | 1.9 | 1.5 |

¹9 = 100% established; ²9 = ideal

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

| | | |
|---|---|---|
| 1. NAME OF APPLICANT(S) Pure Seed Testing, Inc. | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER PST-4CR1 | 3. VARIETY NAME Florentine GT |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) PO Box 449 Hubbard, OR 97032 | 5. TELEPHONE (include area code) 503-263-0719 | 6. FAX (include area code) 503-263-0703 |
| 7. PVPO NUMBER 2005 00 120 | | |

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☐ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership. (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Pure Seed Testing, Inc. has licensed Florentine GT to Turf Seed, Inc.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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